Chapter 12 - Correlation

Question 1: From the following data, compute the Coefficient of Correlation between X and Y series:

	X-series	Y-series
Number of items	6	6
Arithmetic Mean	350	138
Squares of Deviations from Mean	19	94

Summation of the product of deviations of X and Y series from their respective arithmetic mean = 41.

Solution:

Given,

N = 6, $\bar{X}$ = 350, $\bar{Y}$ = 138, = 19, = 94, xy = 41

$$r = \frac{\sum xy}{\sqrt{\sum x^2 \times \sum y^2}}$$

Substituting the values, we get

$$r = \frac{41}{\sqrt{19 \times 94}} = \frac{41}{\sqrt{1,786}} = \frac{41}{42.26} = 0.97$$

Coefficient of Correlation (r) = +0.97

Question 2: What is Correlation?

Solution: According to Boddington, "Wherever some definite connection exists between the 2 or more groups, classes or series or data there is said to be correlation".